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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,199	01/20/2004	Kotaro Watanabe	Q79452	7754

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WASHINGTON, DC 20037

EXAMINER

CHU, JOHN S Y

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/759,199

Applicant(s)

WATANABE ET AL.

Examiner

John S. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/20/04</u> . | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

This Office action is in response to the application filed January 20, 2004.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 9, and 11 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by MIYAKE et al.

The claimed invention is drawn to the following:

1. A positive planographic printing plate precursor comprising a hydrophilic support, and a lower layer and an image recording layer disposed on the hydrophilic support, wherein:  
the lower layer includes a water-insoluble and alkali-soluble resin,  
and  
the image recording layer includes a novolak type phenolic resin containing phenol as a structural unit thereof and a light-to-heat conversion agent, and exhibits increased solubility in an alkaline aqueous solution when exposed to an infrared laser.

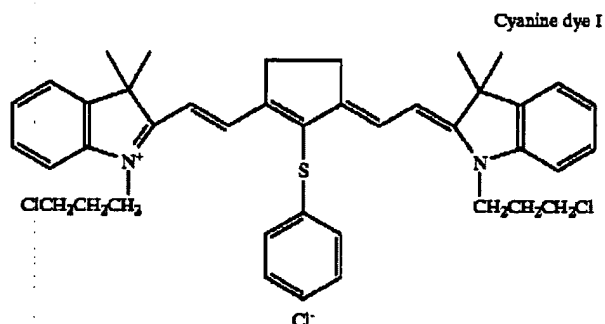
MIYAKE et al discloses a positive photosensitive image-forming material for an infrared laser. Applicants are directed to “Photosensitive solution 4” found in column 46, line 60 – column 47, line 37. Here the solution discloses the use of p-cresol/phenol/formaldehyde novolak

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resin (p-cresol/phenol= 5/5) in a solution with a light-to-heat conversion compound (Cyanine dye

1) see below:

Photosensitive solution 4	
Copolymer of benzyl methacrylate and methacrylic acid (molar ratio: 72:28, weight-average molecular weight: 70000)	0.9 g
-continued	
Photosensitive solution 4	
p-cresol/phenol/formaldehyde novolak resin (p-cresol/phenol = 5/5, weight-average molecular weight: 3500, containing 0.5% by weight of unreacted cresol)	0.1 g
Disulfone compound (II-3)	0.05 g
p-toluenesulfonic acid	0.003 g
Tetrahydrophthalic anhydride	0.03 g
Cyanine dye 1	0.017 g
4-(p-Hydroxybenzoylamino-phenyl)-2,6-bis(trichloromethyl)-s-triazine	0.01 g
A dye prepared by using 1-naphthalenesulfonic anion as pair anion of Victoria Pure Blue	0.015 g
Megafack F-177 (manufactured by Dainippon Ink & Chemicals, Inc., fluoro type surfactant)	0.05 g
$\gamma$ -butyrolactone	2 g
Methyl ethyl ketone	20 g
1-methoxy-2-propanol	1 g



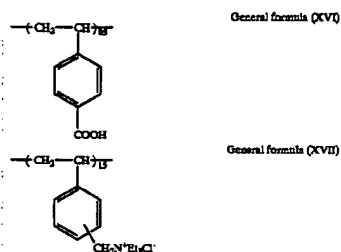
The novolak resin anticipates the claimed novolak-type phenolic resin as recited in claim 1 of the current application. The examiner notes that the ratio of p-cresol to phenol is 5/5 meeting the dependent claims which recite the mole percent range to be 20-90%. Applicants are further directed to the copolymer of benzyl methacrylate/methacrylic acid blended with the

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novolak resin. Here the copolymer meets the limitations for claim 9 wherein the image recording layer is recited to have an alkali-soluble resin other than a novolak resin selected from resins which include a methacrylic resin.

The disclosure in column 45, lines 1-23 exemplify the polymer used in the underlayer of MIYAKE et al as seen below:

Each of the following photosensitive solutions 1-4 was coated on the resulting substrate B so that the coated amount is 1.8 g/m<sup>2</sup> to obtain planographic printing plates B1-B4.



These structures anticipate claim 11 when recite the water-insoluble and alkali-soluble resin in the lower layer is a styrene-based resin.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over MIYAKE et al in view of KITSON et al (6,858,359 B2).

The claimed invention has been recited above and is included by reference.

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MIYAKE et al has been discussed in previous paragraph 2 for the limitations related to claims 1-6, 9 and 11. MIYAKE et al lacks the claimed limitations as recited in dependent claims 7,8, 10, 12 and 13.

KITSON et al '359 discloses in the same field of invention of planographic printing plates, a thermally sensitive, multilayer imageable element comprising a substrate, an underlayer over said substrate and a top layer over said underlayer. Applicants are directed to column 9, lines 1-8 for the disclosure of suitable novolak resins used in the imageable top layer. The components used to make the novolak resin include phenol, cresol, m-cresol, p-cresol, t-butyl phenol and pyrogallol as phenolic components, which can be condensed with formaldehyde. The disclosure provides to the skilled artisan a teaching that these components are functionally equivalent to one another with respect to use in a novolak resin for imageable top layers in planographic printing plates.

Applicants are further directed to column 7, lines 6-14 wherein the material comprises a photothermal conversion agent, which is preferably used in the underlayer as recited in lines 10-13. Examples 1-6 in column 19, lines 10-56 exemplify the use of an IR Dye A in the underlayer as see in line 18. Seeing this disclosure, one of ordinary skill is taught and motivated to use photothermal converting agents in any of the layers of a lithographic printing plate.

Oniums salts are disclosed in column 9, lines 43 – column 10, line 14 wherein the onium salts are used as additives in the image recording top layer. It would have been *prima facie* obvious to one of ordinary skill in the art of lithographic printing plates to add an onium salt as an additive ingredient to the imaging layer as suggested by MIYAKE et al with the reasonable expectation of same or similar results as taught in MIYAKE et al.

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Use of a blend of novolak resins singly or in combination is disclosed in column 7, line 65 – column 8, line 4. Here again the skilled artisan is taught to use more than one novolak resin meeting the recited scope in claim 8, such that a 50/50 mix easily renders the claim *prima facie* obvious.

It would have been *prima facie* obvious to one of ordinary skill in the art of lithographic printing plates to add a photothermal conversion agent into the underlayer of MIYAKE et al as taught by KITSON et al as well as use an additive onium salt and have a novolak blend in the top layer with reasonable expectation of same or similar results as recited in MIYAKE et al. Further the artisan would expect the top layer to have minimal ablation of the layer upon exposure to an infrared laser as taught in KITSON et al, column 7, lines 9-12.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. AOSHIMA (6,627,386 B2) teaches a negative working printing plate which is sensitive to infrared laser that has an underlayer and an imaging layer.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Chu whose telephone number is (571) 272-1329. The examiner can normally be reached on Monday - Friday from 9:30 am to 6:00 pm.

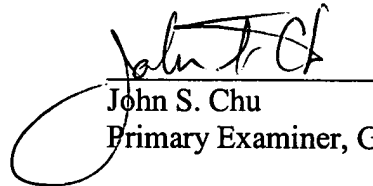
The fax phone number for the USPTO is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PMR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



John S. Chu  
Primary Examiner, Group 1700

J.Chu  
April 21, 2005